

DVD WRITERS

INTRODUCTION

DVDs are one of the best means of storing computer data and video. With today's two-layer formats, you can pack over 8GB of data on a single, inexpensive disc.

The possibilities are almost limitless. You could create a backup copy of all your important documents and emails, or clear the clutter from your hard disk without having to sacrifice any files. And if you have a digital video camera, you can even record important family events to a disc that the grandparents can play on their PC or DVD player.

There was a time when writing to DVD used to involve tiresome waiting while the DVD drive burned all the data to disc. But today's DVD writers are faster than ever, and the best can write a complete DVD disc in under six minutes. This month, we've rounded up 18 of the latest and greatest DVD writers and tested them with every type of disc. We'll show you the best way to create DVDs quickly, easily and cheaply.

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For storing home video and backing up files, DVD is second to none. We test 18 DVD writers that'll help you save on storage and save money into the bargain



EASY WRITERS

Choosing a... DVD Writer

Today's DVD writers can write to six or seven different types of disc, so choosing the one that suits you best can be confusing. Here are a few things to look for before you buy.

TOOLS OF THE TRADE

To create a DVD, you need a DVD writer in your PC and special software. The two most common applications for writing DVDs are Ahead's Nero and Roxio's Creator. Unless you already own one of these applications, look to see which software each drive comes with. The table on page 106 shows exactly which software each manufacturer includes.

DVD drives are complicated devices; a tiny computer program hidden inside the drive controls them. This software, known as firmware, dictates what type of discs the drive writes to and how fast it can write to them. When you buy a DVD drive, you should download the latest firmware from the manufacturer's website to guarantee that it works at its best. We conducted all our tests using the latest firmware available.

GENERIC ENGINEERING

Blank DVDs can be very cheap, but the cheapest generic discs are often unreliable. We tested using several

branded DVDs to see which worked best with each drive. We used blank DVDs from Imation and Verbatim and CD-Rs from Sony and Imation.

DVDs also come in various types. DVD+R and DVD-R discs hold 4.5GB of data and can be written once. DVD-RW and DVD+RW are more expensive, but you can use them over and over again. DVD+R DL and DVD-R DL are two-layer discs. These hold 8.5GB of data, but they are more expensive and take longer to burn.

ETCH-A-SKETCH

If you plan to record important data to blank CDs or DVDs for archiving purposes, you may want to label them for easy categorisation and retrieval. You can use special pens or stick-on labels for this, but these methods can look messy. More worryingly, a report from an agency of the US Department of Commerce has suggested that adhesive labels can damage the data stored on a disc.

Some drives in this test support an alternative form of labelling. Technologies called LightScribe and LabelFlash use the drive's laser to etch a picture or text on to the back of the DVD. The results can be impressive, but etching a label using either method takes time, and you need to use special discs.

DVD WRITERS

INTERNAL DVD WRITERS

ASUS DRW-1608P2S

★★★★★

£38 inc VAT



The Asus DRW-1608P2S was one of the fastest drives in this group when writing two-layer DVDs: it can write to DVD+R DL and DVD-R DL at 8X. It burned our test DVD-R DL disc faster than any other drive, and more than 15 minutes faster than the slowest. Its other test results were closer to the average, and it was fairly slow in our DVD+RW test. It can also write to DVD-RAM discs.

A great software bundle comprises Nero Express 6 for writing DVDs, Ulead DVD MovieFactory for creating video DVDs and CyberLink PowerDVD 6 for playing them. An IDE cable is included, so installing the drive is easy if you have a spare power plug. Asus even includes a metal prong for ejecting stuck discs.

The DRW-1608P2S is one of the cheapest internal drives in this group and it performs well. It's particularly impressive when writing dual-layer discs. Unless you use DVD+RW media often, this is a great buy.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 5X DVD-RAM, 40X CD-R, 32X CD-RW PART CODE DRW-1608P2S SUPPLIER www.techfever.co.uk DETAILS <http://uk.asus.com>

- ✓ Fast when writing two-layer discs
- ✗ Sluggish DVD+RW writing



BENQ DW1650

★★★★

£36 inc VAT

A glossy black front panel makes the DW1650 more attractive than most of the other internal DVD writers in this group. Unfortunately, its DVD writing performance is far less appealing. It produced some of the slowest times in our single-layer DVD+R and DVD-R DVD tests. The DW1650 was more disappointing when writing two-layer DVDs. It refused to burn DVD+R DL any faster than 2.4x. Adjusting the drive's settings with the QSuite utility had no effect.

The tray-eject button on the front of the drive is unnecessarily small and narrow, making it fiddly and difficult to press. BenQ includes a copy of Nero Express 6 for burning discs, but no DVD playback software. The drive comes with mounting screws, but no IDE cable.

The DW1650 produced the fastest time in the group when writing CD-R discs, and performed well in our CD ripping test. But these talents are outweighed by its slow DVD burning, and it's not especially cheap.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 48X CD-R, 32X CD-RW PART CODE DW1650 SUPPLIER www.komplett.co.uk DETAILS www.benq-eu.com

- ✓ Fast CD writing
- ✗ Slow writing DVD-R, DVD+R and two-layer discs



LG GSA-4166B

★★★★★

£43 inc VAT

The GSA-4166B is fast when writing DVD-R and DVD-RW discs. In both tests, its scores were only a few seconds slower than those of the fastest drives in the group. Its performance in most other tests was merely satisfactory, and it was slow in our CD ripping test. When ripping our test CD to MP3, it took over two minutes longer than average. It can write to DVD-RAM discs, though, and supports LightScribe DVD labelling for compatible discs.

The version of Nero that's bundled with the GSA-4166B is basic, but you also get a copy of CyberLink PowerProducer for authoring video DVDs. A copy of PowerDVD is included for watching DVD videos, but it is version 5 rather than version 6. With an IDE cable, mounting screws and an audio cable included in the box, you have everything you need to fit the drive.

If you want to use DVD-RAM and label your discs using LightScribe, the GSA-4166B is an excellent choice. If not, you can buy a faster and cheaper drive.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 5X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE GSA-4166B SUPPLIER www.scan.co.uk DETAILS <http://uk.lge.com>

- ✓ Fast writing to DVD-R and DVD-RW
- ✗ Slow CD ripping



LITEON SuperAllWrite SHM-165P6S-02C

★★★★★

£40 inc VAT

LiteOn's SuperAllWrite has a memorable name, which indicates that, like other drives in this group, this drive can write to DVD-RAM discs.

In tests, the SuperAllWrite performed well, but not brilliantly. Both single-layer disc tests took just over six minutes to complete, and both two-layer tests finished in less than half an hour. But the best drives in the group finished our two-layer tests in between 15 and 20 minutes. The drive took ages to write a test CD-R. At four minutes 27 seconds, it was almost a minute behind the second-slowest drive.

LiteOn includes a copy of PowerDVD 5 for watching video DVDs and a copy of the Nero Suite for burning discs. Mounting screws are included, plus a choice of coloured fascias.

Despite its name, the SuperAllWrite is decidedly average. For DVD-RAM support, Asus's DRW-1608P2S is a better choice.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 5X DVD-RAM, 48X CD-R, 24X CD-RW PART CODE SHM-165P6S-02C SUPPLIER www.cclonline.com DETAILS www.liteonit.com

- ✓ Reasonable DVD burn speeds
- ✗ Slow CD-R writing



LITEON LightScribe SHW-16H5S-02C

★★★★★

£43 inc VAT

Unlike its sibling the SuperAllWrite, LiteOn's SHW-16H5S-02C can't write to DVD-RAM discs. However, it does support the LightScribe laser labelling system. It was one of the fastest drives in our DVD-R test, taking just five minutes 56 seconds. It also produced the fastest time in our DVD+RW test, at 14 minutes five seconds. It wasn't that fast in our two-layer tests, taking almost half an hour to burn each disc.

LiteOn isn't generous with its software and includes only Nero Express 6 and PowerDVD 5, an old version. You do get two blank LightScribe CD-R discs. Another fascia is also included to help you match the drive to your PC case.

The SHW-16H5S isn't that fast when writing two-layer discs, but its performance is otherwise impressive. If you write mainly DVD-R discs and you want a drive that allows LightScribe labelling, then it is a good choice.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 48X CD-R, 24X CD-RW PART CODE SHW-16H5S-02C SUPPLIER www.cclonline.com DETAILS www.liteonit.com

- ✓ Fast for DVD-R and DVD+RW
- ✗ So-so DL speeds



NEC ND-4551A

★★★★

£42 inc VAT

NEC's ND-4551A uses a rival technology to LightScribe, called LabelFlash. LightScribe discs are incompatible with the ND-4551A, but we found LabelFlash discs online for less than £1 each.

The ND-4551A took 27 minutes 12 seconds to etch a disc label with graphics and text at its highest quality, and less than 15 minutes at draft quality. This is a bit faster than a LightScribe drive, but it's still pretty slow. The etched graphics looked more professional than those on a LightScribe disc, but we found labels written at draft quality were hard to read.

The ND-4551A was one of the quickest drives at writing two-layer discs. It took 18 minutes 34 seconds to write a DVD+R DL disc, and 20 minutes 53 seconds to write a DVD-R DL. In -R tests, it was unremarkable. It is an OEM drive, so there is no software or extras.

This drive is great if you want LabelFlash. But Asus's DRW-1608P2S is similarly fast when writing two-layer discs, and costs less.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 6X DVD-R DL, 8X DVD+R DL, 48X CD-R, 32X CD-RW PART CODE ND-4551A SUPPLIER www.techfever.co.uk DETAILS www.nec.co.uk

- ✓ Fast two-layer writing
- ✗ No software



PHILIPS DVDR1648K



£39 inc VAT



The DVDR1648K performed well in our CD ripping test, only a few seconds slower than the front-runners. Unfortunately, this was the only benchmark in which the DVDR1648K excelled. In all our other tests, it finished nearer the middle or bottom of our speed tables.

The version of Ahead's Nero 6 Suite included can encode video into MPEG2 for burning as a standard DVD, but you have to pay extra if you want to keep doing this beyond the demo period. No software is included for playing back video DVDs. The box contains a second fascia to help you match the drive to the colour of your PC case. A DVD+R disc is included in the box, along with mounting screws for fitting the drive.

The DVDR1648K is hard to recommend. Its performance is neither particularly poor nor particularly good, and the bundle of software included is limited. For £1 less you could buy Asus's DRW-1608P2S, which is faster and comes with a selection of useful software.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 48X CD-R, 32X CD-RW PART CODE DVDR1648K SUPPLIER www.amazon.co.uk DETAILS www.philips.co.uk

- ✓ Fast CD ripping
- ✗ Below-average DVD burn speeds

PIONEER DVR-110



£37 inc VAT



Pioneer's DVR-110 is sold as an OEM drive, so it comes in a plain box with no software or accessories. It performed well in our DVD-R DL test, coming a close second behind the Asus DRW-1608P2S. The DVR-110 was near the top of the table in our DVD+R DL test and performed well in the rewritable DVD tests. Along with the Asus, the DVR-110 is the only drive that can write to both types of two-layer disc at 8X. It can also write to DVD-RAM.

The DVR-110 didn't perform as well in our single-layer DVD writing tests, but times of six minutes 14 seconds for DVD-R and six minutes 21 seconds for DVD+R are acceptable. If you already have DVD writing and playback software, this is a decent choice. If not, you could end up spending £30 more on a decent DVD burning suite.

Most users might as well pay just £1 more for the Asus DRW-1608P2S. It comes with a decent bundle of software in the box, and is similarly nippy when writing two-layer discs.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 5X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE DVR-110 SUPPLIER www.cclonline.com DETAILS www.pioneer.co.uk

- ✓ Fast two-layer writing
- ✗ No software

PLEXTOR PX-755A



£68 inc VAT



The PX-755A is the only drive in the group that claims to write DVD+R DL discs at 10X. But it performed no better in our tests. It was fast in the DVD+R DL test, but five other drives were faster. It finished our DVD-R DL test in 23 minutes and one second, more than five minutes behind the Asus DRW-1608P2S. It didn't do so well with single-layer DVDs. The PX-755A was the second-slowest drive when writing DVD-R and DVD+R discs; only the Amacom AMA-DVRW2-16UF was slower.

The PX-755A fared better when reading and writing CDs, where it was consistently fast. When writing CD-Rs, we had to set the drive to write at 32X instead of the maximum 48X. If we tried to write CD-R discs at 48X, Nero crashed and the disc was rendered useless.

A copy of Ahead's Nero Suite and an extra fascia are included in the box. Unfortunately, the PX-755A is the most expensive internal drive in our group. It's nowhere near fast enough to justify its high price.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 6X DVD-R DL, 10X DVD+R DL, 48X CD-R, 24X CD-RW PART CODE PX-755A/T3 SUPPLIER www.scan.co.uk DETAILS www.plextor.be

- ✓ Fast writing and ripping CDs
- ✗ Expensive, slow DVD+R and DVD-R writing

PLEXTOR PX-750A



£54 inc VAT



Unlike its cousin, the PX-755A, the PX-750A doesn't claim to be able to write DVD+R DL discs at 10X. It's supposed to write DVD+R DL at 8X, but the necessary firmware upgrade wasn't available as we went to press. As such, it took nearly half an hour to write a full disc at 4X. The 750A was five minutes slower than the 755A when writing DVD-R DL discs. It was slow when creating our test DVD+RW. Despite multiple retests, its maximum burn speed was 2X, for a dismal disc time of 23 minutes 43 seconds.

It was better when writing single-layer DVDs. Its DVD-R results were average, and it finished its DVD+R disc less than a minute after the fastest drive. Most of the bundled software turned out to be demo versions, but Ahead's Nero suite is included. There's also a PlexEraser utility for making sensitive data on DVD-/R and CD-R media unreadable.

It supports DVD-RAM and was the fastest drive in our CD ripping test, but the 750A is still far too expensive.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 5X DVD-RAM, 40X CD-R, 24X CD-RW PART CODE PX-750A SUPPLIER www.dabs.com DETAILS www.plextor.be

- ✓ Very fast CD ripping
- ✗ Slow DVD+RW writing

SAMSUNG Writemaster SH-W163A



£40 inc VAT



The SH-W163A is the only writer in our round-up that connects to your PC through SATA rather than the more usual IDE cable. This is handy if you have a modern PC, as SATA cables are far smaller and less fiddly to install than IDE ribbon cables. It produced the best time in our DVD+R test, and came second in our DVD-R test.

Unfortunately, it wasn't quite as fast when creating two-layer discs. It took just over 27 minutes to write a DVD-R DL and just over 25 minutes to write a DVD+R DL disc. These times place it in the middle of the group. The bundled version of Ahead's Nero software is impressive, though. It includes a copy of the Recode utility, which enables you to squash two-layer video DVDs on to a single-layer disc.

All the necessary SATA cables are included in the box, but there's no software for playing video DVDs. If you write more single-layer than two-layer discs, this is a good choice.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 48X CD-R, 32X CD-RW PART CODE SH-W163A SUPPLIER www.udiggit.com DETAILS www.samsunggoms-europe.com

- ✓ SATA, fast DVD+R and DVD-R writing

SONY DRU-810A



£43 inc VAT



Sony's DRU-810A performed exceedingly well in our DVD+R DL test. It produced the fastest time when creating our test DVD+R DL, taking just over 15 minutes. It completed our DVD+R test in just under six minutes and produced an impressive time in our CD ripping test.

This rapid performance makes the DRU-810A's poor showing in our DVD-R DL and -R tests all the more disappointing. The DRU-810A proved to be one of the slowest drives in both benchmarks, taking nearly half an hour to write a dual-layer disc and almost seven minutes to fill a DVD-R.

A copy of Ahead's Nero is included, as well as an alternative fascia, an IDE cable and mounting screws. There's no software for playing video DVDs, though. This is an excellent drive if you write only to DVD+R and DVD+R DL media but a poor choice if you want to use a wide variety of discs. If you regularly use DVD-R DL discs, this is one to avoid.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 48X CD-R, 32X CD-RW PART CODE DRU-810A SUPPLIER www.cclonline.com DETAILS www.sony.co.uk

- ✓ Fast writing to DVD+R DL
- ✗ Slow DVD-R and DVD-R DL writing

EXTERNAL DVD WRITERS

AMACOM
AMA-DVRW2-16UF

★★★★

£100 inc VAT

Amacom's AMA-DVRW2-16UF has an unwieldy name, and it looks generic in its plain black box. It was the slowest drive in the test when writing DVD+R discs and lagged further behind the others when writing our test DVD-R. It was the only drive to take longer than 10 minutes to finish the test, refusing to run at over 8X speed.

This is the only drive in the group that can't write to two-layer DVD-R DL discs. It writes to DVD+R DL media, but it's not fast. It completed our test finally after more than 30 minutes.

Copies of Nero Express 6 and CyberLink PowerDVD 5 are included, but the bundled version of Nero is the oldest in the group. The drive connects to a PC through USB Hi-Speed and FireWire 400 interfaces, and cables for both are included.

The AMA-DVRW2-16UF is disappointing. It's slow, incapable of writing two-layer DVD-R DL discs and expensive. There's no reason not to buy a better drive.

DVD WRITER 16X DVD-R, 16X DVD+R, 4X DVD-RW, 4X DVD+RW, 2.4X DVD+R DL, 48X CD-R, 24X CD-RW PART CODE AMA-DVRW2-16AF SUPPLIER www.originstorage.com DETAILS www.originstorage.com

❑ Slow writing to DVD-R
❑ Can't write to DVD-R DL

FREECOM
Classic DVD+/-RW
16X Double Layer

★★★★

£64 inc VAT

The Freecom Classic's black exterior is simple and understated. Unlike most manufacturers, Freecom includes Roxio's Easy CD Creator software instead of Ahead's Nero. Two versions are included, one for Windows XP/2000 users and one for Windows 98 SE and Me users. But this second version doesn't let you write two-layer DVDs.

This is a shame, because the Classic was the second-fastest external drive in our DVD+R DL test. It was also the second-fastest drive overall in our CD-R test. When using other types of media, though, it was less impressive. It was slow in our DVD-R DL and DVD-RW tests, burning the latter at 2X on all our test media.

The Classic is cheap, and burns DVD+R DL discs quickly for an external drive. But its performance elsewhere is poor and it's particularly bad at writing to DVD-RW discs. Better external drives are available for less.

DVD WRITER 16X DVD-R, 16X DVD+R, 4X DVD-RW, 4X DVD+RW, 4X DVD-R DL, 4X DVD+R DL, 48X CD-R, 24X CD-RW PART CODE 23727 SUPPLIER www.epcbuyer.com DETAILS www.freecom.com

❑ Fast CD-R writing
❑ Slow DVD-RW writing

HP
dvd840e

★★★★

£66 inc VAT

The dvd840e's curvy, rotund makes the drive seem larger than it needs to be. It supports LightScribe, so you can laser-etch labels on to special CD and DVD discs. The SureThing CD Labeller software and a sample LightScribe disc are included in the box, along with a copy of Nero and CyberLink's PowerDVD 6.

When writing our test DVD+R DL discs the dvd840e refused to write faster than 2.4X and took just over 45 minutes to fill a disc. Its CD ripping speeds were unimpressive, and it produced the slowest score from an external drive. It's the only external drive here that supports DVD-RAM. The dvd840e performed better with other discs. It was the fastest external drive when writing DVD-R DL discs and the fastest drive overall writing to DVD-R.

The dvd840e is inexpensive and great for writing DVD-R discs, but its performance elsewhere is inconsistent. Unless you need an external drive that supports DVD-RAM, you're better off with the Samsung SE-W164L.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 5X DVD-RAM, 40X CD-R, 32X CD-RW PART CODE dvd840e SUPPLIER www.cclonline.com DETAILS www.hp.com

❑ Fast writing DVD-R
❑ Slow writing to DVD+R DL

LACIE
d2 DVD±RW with
LightScribe 16x

★★★★★

£109 inc VAT

LaCie's d2 is the most expensive external drive in the group, but it looks good and its solid case feels well made.

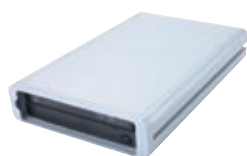
It performed well in most tests. It produced the second-best scores in the group when writing DVD+R and DVD+RW. It wasn't as impressive when writing to DVD+R DL, but nowhere near as slow as HP's dvd840e.

The d2 can connect to your PC using USB Hi-Speed or FireWire 400, and all the cables are included. LaCie has included versions of Roxio's Easy Media Creator suite for Windows XP/2000 and Windows 98/Me, but only Windows XP and 2000 users will be able to write to two-layer discs and use LightScribe labels. Two LightScribe discs are included in the box, plus DVDMAX 5 software for playing video DVDs.

If you plan to carry your external drive around a lot, the LaCie's sturdy case is ideal, but otherwise the Samsung is better value.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 48X CD-R, 32X CD-RW PART CODE 300978EK SUPPLIER www.microwarehouse.co.uk DETAILS www.lacie.com/uk

❑ Fast writing to DVD+R
❑ Most expensive drive here

SAMSUNG
Writemaster
SE-W164L

★★★★★

£62 inc VAT

BEST BUY Samsung's SE-W164L looks good in its understated black and silver case, and performed well in most tests. It wrote a DVD-R in less than six minutes, and it produced the third-fastest time in our DVD+R test. Its results in our two-layer tests were average, but it was in the top four results for both DVD+RW and DVD-RW. It disappointed only in our CD ripping test, where it took two minutes 49 seconds – the best drives finished in less than a minute and a half.

It connects to a PC through USB Hi-Speed, and a cable is included, as well as a desk stand for the drive. There's a copy of Ahead's Nero, but no software for watching video DVDs. The drive is compatible with LightScribe, so you can laser-etch labels on to special DVD media.

The SE-W164L is the cheapest external drive here; it's also the best. Unless you need an external drive that connects through FireWire or supports DVD-RAM, this is the one to buy.

DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 48X CD-R, 32X CD-RW PART CODE SE-W164L SUPPLIER www.pixmania.co.uk DETAILS www.samsunggoms-europe.com

❑ Fast writing to DVD+R

SONY
DRX-810UL

★★★★★

£94 inc VAT

Sony's DRX-810UL connects to your PC using USB Hi-Speed, FireWire 400 or four-pin FireWire. It was really fast in our DVD+R DL writing test, second only to Sony's internal drive. It was the third-fastest drive in the CD-ripping benchmark, finishing the test in less than a minute and a half. Sadly it was disappointingly slow when writing DVD-R DL discs, taking almost half an hour. Its performance in our DVD-RW and DVD+RW tests was unremarkable.

The drive comes with a USB cable, a four-pin FireWire cable and a stand that holds the drive vertically. There's also a copy of Ahead's Nero DVD burning software, but no utility for watching video DVDs.

The DRX-810UL isn't as expensive as LaCie's d2 or Amacom's AMA-DVRW2-16UF, but it costs more than Samsung's SE-W164L. Unless you want to connect your drive to your PC through four-pin FireWire or you want the fastest possible DVD+R DL burning, buy the Samsung drive instead and save yourself £30.

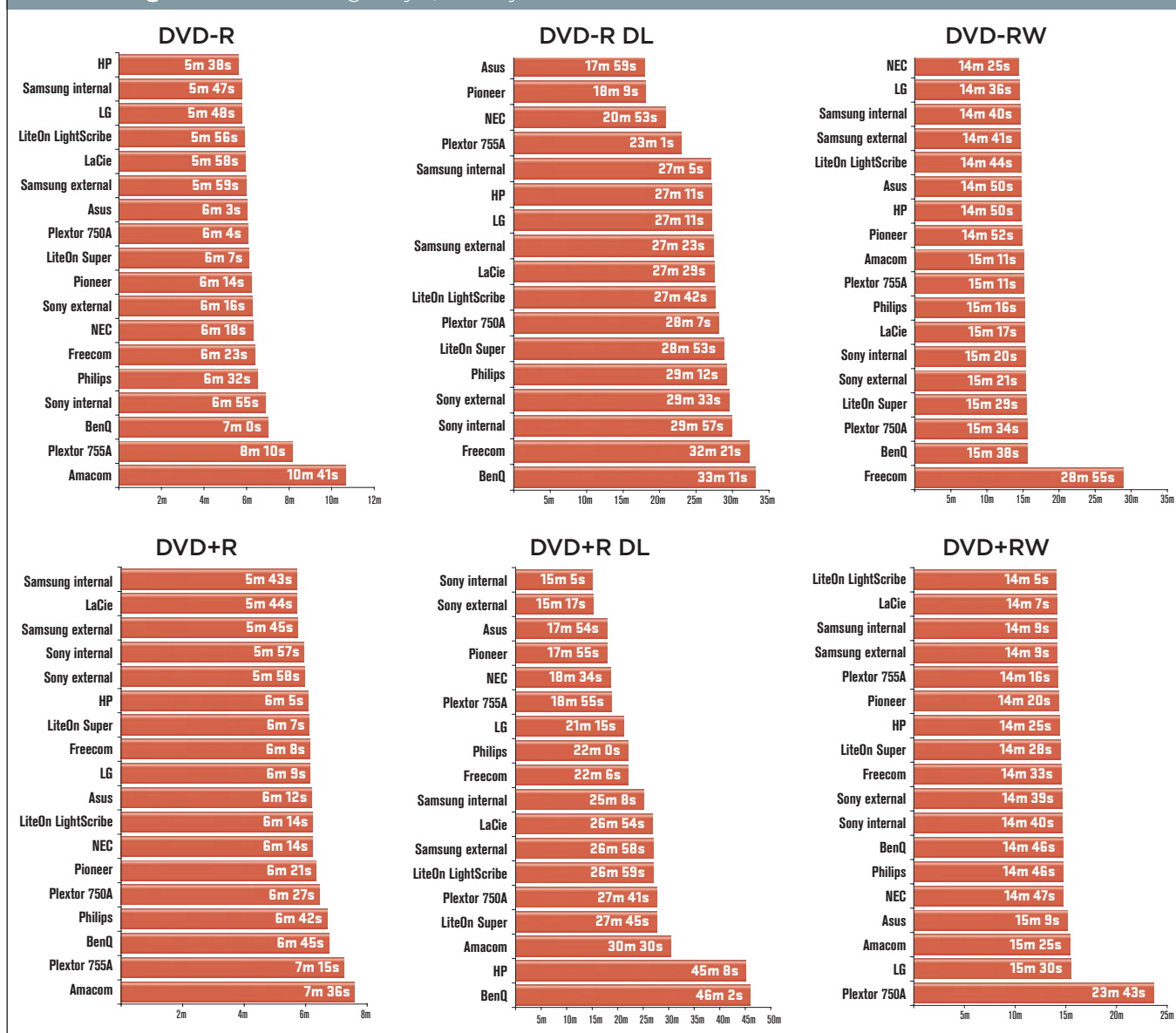
DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 48X CD-R, 32X CD-RW PART CODE DRX-810UL SUPPLIER www.scan.co.uk DETAILS www.sony.co.uk

❑ Supports four-pin FireWire, fast DVD+R DL writing
❑ Slow DVD-R DL burn

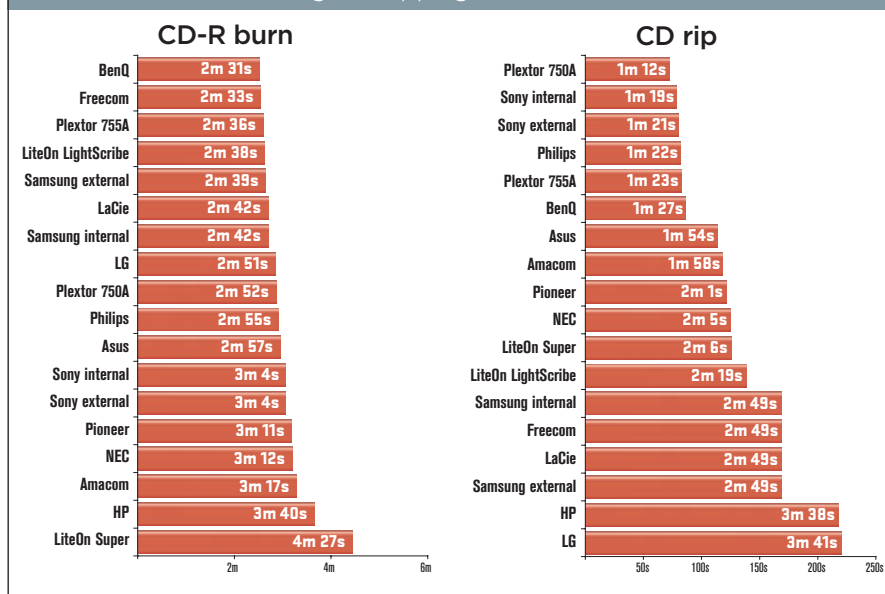


BENCHMARKS

DVD Burning Burn times for single-layer, two-layer and RW discs



CD Performance Burning and ripping



How we test DVD writers

To ensure a level playing field when performing all our tests, we used the latest version of Ahead's Nero software, which is Nero 7 Premium.

All the drives were updated with the latest firmware available before testing to ensure the fastest possible speeds.

We conducted a number of tests using different disc types to assess each drive's performance. The DVD+R and DVD-R graphs above show how long each drive took to fill a disc with 4.7GB of 100MB files. Two-layer discs were filled with 8.5GB of 100MB files in the same way.

When we were testing DVD+/-RW discs, we simulated a PC backup task by burning 4.7GB of smaller files. For our CD writing test, we wrote an 80-minute audio CD. Our CD ripping tests show the time taken to rip five CD audio tracks to MP3 using dBpowerAMP.



INTERNAL DVD WRITERS



MANUFACTURER	ASUS	BENQ	LG	LITEON	LITEON	NEC	PHILIPS	PIONEER	PLEXTOR
MODEL	DRW-1608P2S	DW1650	GSA-4166B	SHM-165 P6S-02C	SHW-16H5S-02C	ND-4551A	DVDR 1648K	DVR-110	PX-755A
Rating	★★★★★	★★	★★★★	★★★★	★★★★	★★★	★★★★	★★★★	★★
Device type	Internal	Internal	Internal	Internal	Internal	Internal	Internal	Internal	Internal
Interface	UltraDMA 33	UltraDMA 33	UltraDMA 33	UltraDMA 33	UltraDMA 33	UltraDMA 33	UltraDMA 33	UltraDMA 66	UltraDMA 33
Buffer	2MB	2MB	2MB	2MB	2MB	2MB	2MB	2MB	2MB
Dimensions (WxHxD)	148x42x180mm	146x42x178mm	146x41x165mm	145x41x170mm	145x41x170mm	148x42x190mm	150x40x200mm	148x42x180mm	146x41x170mm
Weight	1.0kg	0.8kg	0.8kg	0.9kg	0.9kg	0.9kg	1.0kg	1.0kg	1.0kg
QUOTED READ									
CD-ROM	40X	48X	48X	48X	48X	48X	48X	40X	48X
DVD-ROM	16X	16X	16X	16X	16X	16X	16X	16X	16X
DVD+ROM dual-layer	12X	Not listed	Not listed	Not listed	Not listed	7X	Not listed	8X	Not listed
DVD-RAM	5X	N/A	5X	5X	N/A	5X	N/A	5X	N/A
QUOTED WRITE									
CD-R/RW	40X/32X	48X/32X	48X/32X	48X/24X	48X/24X	48X/32X	48X/32X	40X/32X	48X/24X
DVD+R	16X	16X	16X	16X	16X	16X	16X	16X	16X
DVD+RW	8X	8X	8X	8X	8X	8X	8X	8X	8X
DVD-R	16X	16X	16X	16X	16X	16X	16X	16X	16X
DVD-RW	6X	6X	6X	6X	6X	6X	6X	6X	6X
DVD+R DL	8X	8X	8X	8X	8X	8X	8X	8X	10X
DVD-R DL	8X	4X	4X	4X	4X	6X	4X	8X	6X
DVD-RAM	5X	N/A	5X	5X	N/A	5X	N/A	5X	N/A
FEATURES									
Pit art labelling	No	No	LightScribe	No	LightScribe	LabelFlash	No	No	No
Autoplay	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multi-session	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mount Rainier	No	No	No	No	No	No	No	No	Yes
EXTRAS									
DVD playback software	CyberLink Power2Go 6	None	CyberLink Power2Go 5	CyberLink Power2Go 5	CyberLink Power2Go 5	None	None	None	None
DVD/CD burning software	Nero Suite 6.6	Nero Suite 6.6	Nero Suite 6.6	Nero Suite 6.6	Nero Suite 6.6	None	Nero Suite 6.6	None	Nero Suite 6.6
Blank media	None	None	None	None	2x LightScribe CD-R	None	1x DVD+R	None	None
Other standard accessories	Audio cable, IDE cable, emergency eject pin	Mounting screws	Audio cable, IDE cable, mounting screws	Audio cable, mounting screws, two alternative front panels	Audio cable, mounting screws, one alternative front panel	None	Audio cable, mounting screws, one alternative front panel	None	IDE cable, mounting screws, one alternative front panel
BUYING INFORMATION									
Price including VAT	£38	£36	£43	£40	£43	£42	£39	£37	£68
Supplier	www.techfever.co.uk	www.komplett.co.uk	www.scan.co.uk	www.cclonline.com	www.cclonline.com	www.techfever.co.uk	www.amazon.co.uk	www.cclonline.com	www.scan.co.uk
Details	http://uk.asus.com	www.benq-eu.com	http://uk.lge.com	www.liteonit.com	www.liteonit.com	www.nec.co.uk	www.philips.co.uk	www.pioneer.co.uk	www.plextor.be
Product code	DRW-1608P2S	DW1650	GSA-4166B	SHM-165P6S-02C	SHW-16H5S-02C	ND-4551A	DVDR1648K	DVR-110	PX-755A/T3

EXTERNAL DVD WRITERS



MANUFACTURER	PLEXTOR	SAMSUNG	SONY	AMACOM	FREECOM	HP	LACIE	SAMSUNG	SONY
MODEL	PX-750A	Writemaster SH-W163A	DRU-810A	AMA-DVR W2-16UF	Classic 16X DoubleLayer	dvd840e	d2 DVD±RW	Writemaster SE-W164L	DRX-810UL
Rating	★★	★★★★★	★★★★	★★	★★★★	★★★★	★★★★	★★★★★	★★★★★
Device type	Internal	Internal	Internal	External	External	External	External	External	External
Interface	UltraDMA 33	SATA 150	UltraDMA 33	FireWire 400, USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	FireWire 400, USB Hi-Speed	USB Hi-Speed	FireWire 400 (six-pin or four-pin) USB Hi-Speed
Buffer	2MB	2MB	2MB	2MB	2MB	2MB	2MB	2MB	2MB
Dimensions (WxHxD)	146x42x170mm	148x42x184mm	146x41x165mm	145x41x170mm	180x53x250mm	235x53x250mm	173x44x268mm	168x50x232mm	164x52x234mm
Weight	0.8kg	1.0kg	0.9kg	0.9kg	1.6kg	1.5kg	1.5kg	1.2kg	1.5kg
QUOTED READ									
CD-ROM	48X	48X	48X	48X	48X	40X	40X	40X	48X
DVD-ROM	16X	16X	16X	16X	16X	16X	16X	16X	16X
DVD+ROM dual-layer	Not listed	8X	Not listed	Not listed	Not listed	Not listed	Not listed	8X	Not listed
DVD-RAM	5X	N/A	N/A	N/A	N/A	5X	N/A	N/A	N/A
QUOTED WRITE									
CD-R/RW	40X/24X	48X/32X	48X/32X	48X/24X	48X/24X	40X/32X	48X/32X	48X/32X	48X/32X
DVD+R	16X	16X	16X	16X	16X	16X	16X	16X	16X
DVD+RW	8X	8X	8X	4X	4X	8X	8X	8X	8X
DVD-R	16X	16X	16X	16X	16X	16X	16X	16X	16X
DVD-RW	6X	6X	6X	4X	4X	6X	6X	6X	6X
DVD+R DL	8X	8X	8X	2.4X	4X	8X	8X	8X	8X
DVD-R DL	8X	4X	4X	N/A	4X	4X	4X	4X	4X
DVD-RAM	5X	N/A	N/A	N/A	N/A	5X	N/A	N/A	N/A
FEATURES									
Pit art labelling	No	No	No	No	No	LightScribe	LightScribe	LightScribe	No
Autoplay	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multi-session	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mount Rainier	Yes	No	No	No	No	No	No	No	No
EXTRAS									
DVD playback software	None	None	None	CyberLink Power2Go 5	DVDMAX 4.0	CyberLink Power2Go 6	DVDMAX 5.0	None	None
DVD/CD burning software	Nero Suite 6.6, Pinnacle Instant CD/DVD LE 7	Nero Suite 6.6	Nero Suite 6.6	Nero Suite 6.3	Roxio Easy Media Creator 7, Roxio Easy CD and DVD Creator 6	Nero Suite 6.6, SureThing CD Labeler	Roxio Easy Media Creator 7, Roxio Easy CD and DVD Creator 6	Nero Suite 6.6	Nero Suite 6.6
Blank media	None	None	None	None	1x DVD+R	1x LightScribe CD-R	1x LightScribe DVD+R, 1x LightScribe CD-R	None	None
Other standard accessories	IDE cable, one alternative front panel	1 SATA data cable, 1 SATA power cable, mounting screws	IDE cable, mounting screws, one alternative front panel	USB and FireWire cables	USB cable	USB cable, desk stand	USB and FireWire cables	USB cable, desk stand	USB and four-pin FireWire cables, desk stand
BUYING INFORMATION									
Price including VAT	£54	£40	£43	£100	£64	£66	£109	£62	£94
Supplier	www.dabs.com	www.udiggit.com	www.cclonline.com	www.originstorage.com	www.epcbuyer.com	www.cclonline.com	www.microwarehouse.co.uk	www.pixmania.co.uk	www.scan.co.uk
Details	www.plextor.be	www.samsungoms-europe.com	www.sony.co.uk	www.originstorage.com	www.freecom.com	www.hp.com	www.lacie.com/uk	www.samsungoms-europe.com	www.sony.co.uk
Product code	PX-750A	SH-W163A	DRU-810A	AMA-DVRW2-16UF	Z3727	dvd840e	300978EK	SE-W164L	DRX-810UL

DVD WRITERS

Bundled software

This table shows the CD and DVD burning software each manufacturer includes with its drive. DVD playback and labelling software is not listed. The NEC and Pioneer drives are not listed because as OEM products they come without software.

Some manufacturers include more than one DVD burning application. Freecom and LaCie include two versions of Roxio's Creator suite. One version works on Windows 2000 and XP, and the other on Windows 98 and Me. Most other manufacturers include a version of Ahead's

Nero suite. A few manufacturers provide Nero Recode, a tool for squeezing large video DVDs on to a single DVD+R or DVD-R. Plextor supplies a version of Nero that lacks several common components, but it throws in Pinnacle's Instant CD/DVD LE.

SOFTWARE	ASUS	BENQ	FRECOM	HP	LACIE	LG	LITEON	AMACOM	PHILIPS	PLEXTOR	SAMSUNG	SONY
Ahead Nero Suite												
BackItUp	1.20.52	1.20.52	-	1.20.54	-	1.20.53	1.20.50	1.20.26	1.20.57	1.20.52	1.20.53	1.20.52
Burning ROM	6.6.0.14	6.6.0.14	-	6.6.0.16	-	6.6.0.15	6.6.0.13	6.3.1.26	6.6.0.17	6.6.0.14	6.6.0.15	6.6.0.14
CDSpeed	4.0.1	3.8.2.0	-	4.0.5	-	3.8.2.0	3.8	4.0.6	-	-	3.8.2.0	3.8.2.0
CoverDesigner	2.3.0.42	2.3.0.42	-	2.3.0.46	-	2.3.0.47	2.3.0.40	2.3.0.12	2.3.0.48	2.3.0.42	2.3.0.45	2.3.0.42
DriveSpeed	3.0.1	3.0.1	-	3.0.1	-	3.0.1	3.0.1	2.0.4	3.0.1	-	3.0.1	3.0.1
DMAManager	-	-	-	-	-	1.0.0.13	-	-	-	-	-	-
Express	3.1.0.11	3.1.0.14	-	3.1.0.16	-	3.1.0.21	3.1.0.7	2.1.2.18	3.1.0.16	3.1.0.11	3.1.0.14	3.1.0.14
ImageDrive	-	-	-	-	-	-	-	-	-	-	-	-
InCD	4.3.15.1	4.3.12.0	-	4.3.20.1	-	4.3.18.0	4.3.12.0	4.3.0.5	4.3.20.1	-	4.3.15.1	4.3.14.1
InfoTool	3.0.0	3.0.0	-	3.0.3	-	-	3.0.0	2.2.7.0	3.0.3	-	3.0.2	3.0.0
MediaHome	-	1.3.0.2	-	-	-	-	-	-	1.3.0.3	1.3.0.1	1.3.0.2	1.3.0.3
MediaPlayer	1.4.0.32	-	-	1.4.0.33	-	-	1.4.0.29	1.4.0.23	1.4.0.35	1.4.0.33	-	1.4.0.29
PhotoSnap	-	1.1.0.5	-	1.1.0.6	-	-	1.1.0.4	-	-	-	1.1.0.5	1.1.0.5
PhotoSnap Viewer	-	1.1.0.5	-	1.1.0.6	-	-	1.1.0.4	-	-	-	1.1.0.5	1.1.0.5
Recode	2.2.6.17	2.2.6.17	-	-	-	-	-	2.1.1.18	2.2.6.17	-	2.2.6.17	2.2.6.17
Scout	-	-	-	-	-	-	-	-	-	-	-	-
ShowTime	-	2.0.0.39	-	-	-	-	-	-	2.0.0.44	-	2.0.0.39	2.0.0.39
SoundBox	-	-	-	-	-	-	-	-	-	-	-	-
SoundTrax	1.0.0.50	-	-	1.0.0.52	-	1.0.0.52	1.0.0.49	1.0.0.32	1.0.0.53	1.0.0.50	-	-
StartSmart	2.0.0.20	2.0.0.20	-	2.0.0.26	-	2.0.0.25	2.0.0.20	1.0.1.27	2.0.0.27	2.0.0.20	2.0.0.24	2.0.0.20
WaveEditor	2.0.0.57	-	-	2.0.0.58	-	2.0.0.58	2.0.0.56	2.0.0.38	2.0.0.59	2.0.0.57	-	2.0.0.57
Windows Media Player plug-in	1.2.0.1	1.2.0.1	-	1.2.0.1	-	1.2.0.1	1.2.0.1	1.2.0.1	1.2.0.1	1.2.0.1	1.2.0.1	1.2.0.1
Vision	3.1.0.11	3.1.0.14	-	3.1.0.16	-	-	3.1.0.7	2.1.2.18	3.1.0.16	-	3.1.0.14	3.1.0.14
Ulead DVD MovieFactory												
BurnNow	2.0.0.1	-	-	-	-	-	-	-	-	-	-	-
DMF Launcher	4.0.0	-	-	-	-	-	-	-	-	-	-	-
DiskRecorder	3.5.0.1	-	-	-	-	-	-	-	-	-	-	-
DVD MovieFactory	4.0.0	-	-	-	-	-	-	-	-	-	-	-
DVD Tweak and Fit	2.0.0	-	-	-	-	-	-	-	-	-	-	-
QuickDrop	4.0.0	-	-	-	-	-	-	-	-	-	-	-
Roxio Creator (Windows XP/2000)												
BasicDVD Home	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
Capture	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
CinePlayer	-	-	4.5.0.286	-	-	-	-	-	-	-	-	-
Creator Classic	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
Drag to Disc	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
Device Info	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
DiscCopier	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
DVDBuilder	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
Label Creator	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
Media Manager	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
PhotoSuite	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
RoxioPlayer	-	-	-	-	7.2.0.13	-	-	-	-	-	-	-
Retrieve	-	-	7.2.0.15	-	7.2.0.13	-	-	-	-	-	-	-
Roxio Easy CD & DVD (Windows 98 SE/Me)												
AudioCentral	-	-	1.1.0.277	-	1.1.0.277	-	-	-	-	-	-	-
Creator Classic	-	-	6.3.0.11	-	6.3.0.11	-	-	-	-	-	-	-
Device Info	-	-	6.3.0.11C	-	-	-	-	-	-	-	-	-
DiscCopier	-	-	6.3.0.11	-	6.3.0.11	-	-	-	-	-	-	-
Drag to Disc	-	-	-	-	-	-	-	-	-	-	-	-
DVD Builder	-	-	1.3.0.11	-	1.3.0.11	-	-	-	-	-	-	-
DVDMAX	-	-	4.0.0	-	5.0.0	-	-	-	-	-	-	-
PhotoSuite	-	-	5.0.0	-	-	-	-	-	-	-	-	-
Retrieve	-	-	6.3.0.11	-	6.3.0.11	-	-	-	-	-	-	-
Roxio Player	-	-	6.1.1720.0	-	6.1.1720.0	-	-	-	-	-	-	-
Pinnacle Instant CD/DVD LE												
CDWizard	-	-	-	-	-	-	-	-	-	7.1.2.49	-	-
InstantAudio	-	-	-	-	-	-	-	-	-	4.0.2.62	-	-
InstantBackup	-	-	-	-	-	-	-	-	-	2.3.8.507	-	-
InstantCopy	-	-	-	-	-	-	-	-	-	8.0.3.320	-	-
InstantDisc	-	-	-	-	-	-	-	-	-	8.0.1.48	-	-
InstantDrive	-	-	-	-	-	-	-	-	-	1.1.1.65	-	-
InstantMusic	-	-	-	-	-	-	-	-	-	2.3.6.354	-	-
InstantWrite	-	-	-	-	-	-	-	-	-	4.2.0.62	-	-

Labs Verdict DVD writers

This month's test proves that you don't have to buy the most expensive DVD writer to get the best performance. In fact, both of the best drives are available at very reasonable prices.

For those who want an internal drive to install inside their PC case, two stand out. Samsung's Writemaster SH-W163A is the only choice if you want to connect your new DVD writer using SATA. It costs just £40. If you're happy with an old-fashioned IDE cable connection, go for Asus's DRW-1608P2S. It

costs just £38, it's very fast when writing double-layer discs and it comes with a great bundle of software. It's our Best Buy.

The choice of external drives is more complicated.

If you want to use FireWire to connect your drive to your PC, buy Sony's DRX-810UL as it accepts four- and six-pin FireWire connections. Otherwise, go for Samsung's Writemaster SE-W164L. It's cheap, fast in every test other than our CD ripping task and comes with plenty of software. It wins our Best Buy award. **CS**

ASUS DRW-1608P2S



SAMSUNG Writemaster SE-W164L

